REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1, 2, 4-6 and 8 are now present in the application. Claims 1, 4, 5 and 8 have been amended. Claims 1 and 5 are independent. Reconsideration of this application, as amended, is respectfully requested.

Interview with the Examiner

A telephone interview was conducted with the Examiner in charge of the above-identified application on June 13, 2008. Applicants greatly appreciate the courtesy shown by the Examiner during the interview.

During the interview with the Examiner, Applicants' representative presented argument with regard to the rejections under 35 U.S.C. § 112 and 103(a). In particular, Applicants' representative presented proposed amendments to address the rejection under 35 U.S.C. § 112, second paragraph. Applicants' representative also presented arguments that Lee and Migdal fail to teach "determining a number of sample points on each connection line" and "the sample points for the reconstructed 3D model are located on the 3D connection lines despite of the number of the sample points" as recited in proposed claims 1 and 5. The Examiner indicated further search and consideration will be necessary. Therefore, no agreement has been reached during the interview.

Claim Rejections under 35 U.S.C. § 112

Claims 1, 2, 4-6 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

In view of the foregoing amendments, it is respectfully submitted that this rejection has been addressed. In particular, the number of sample points are determined from each connection line for reconstructing the 3D model. Since each of the sample points is a point of the corresponding connection line, no matter what the number of sample points is, those sample points are always located on the connection lines.

Accordingly, all pending claims are now definite and clear. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, are therefore respectfully requested.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 2, 4-6 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee, "Fast head modeling for animation", in view of Migdal, U.S. Patent No. 6,208,347. This rejection is respectfully traversed.

In light of the foregoing amendments to the claims, Applicants respectfully submit that this rejection has been obviated and/or rendered moot. As the Examiner will note, independent claims 1 and 5 have been amended to recite a combination of steps including "determining a number of sample points on each connection line" and "the sample points for the reconstructed

3D model are located on the 3D connection lines despite of the number of the sample points." Applicants respectfully submit that the above combination of steps as set forth in independent claims 1 and 5 is not disclosed nor suggested by the references relied on by the Examiner.

As explained during the interview, the present invention obtains the 3D feature-lines from the original 3D model data first, converts the 3D feature-lines into 3D threads including the connection joints, the connection lines, and the loops, and then determines the number of sample points on the connection lines (*e.g.,* the nodes on the connection lines as shown in FIG. 4). In other words, in the present invention, the connection lines are obtained *before* the number of sample points are determined. By selecting a proper number of sample points on the connection lines, the desired resolution for the reconstructed 3D model can be achieved. The more the sample points are selected, the higher the resolution of the reconstructed 3D model will be.

The Examiner has correctly acknowledged that Lee fails to teach "determining sample numbers of each connection line, adding or deleting the loops, and outputting the 3D threads" as recited in previously presented claims 1 and 5. In fact, Lee simply discloses obtaining the features points from the generic 3D model first, and then used the "snake" to obtain the correspondence between those points (see Sections 2.2 and 2.2.1 of Lee). In other words, the "snake" (i.e., the line between points) is obtained *after* the feature points are determined. Therefore, the number of the feature points is *fixed* before the snake is obtained. Accordingly, Lee fails to teach "determining a number of sample points on each connection line" as recited in claims 1 and 5. Even if the number of the feature points were changeable after the snake is obtained, Lee has to obtain a *new* snake due to the change of the number of the feature points. In

addition, the feature points are the original data from the 3D generic model, not the points obtained from the snake. Lee simply discloses that the snake is obtained by connecting the feature points, but fails to teach that the feature points are obtained from the snake. Unlike Lee, in the present invention, the sample points are obtained from the connection lines, which is opposite to Lee.

Migdal also fails to cure the deficiencies of Lee. As shown in FIGs. 1, 2a and 2b, the 6D data points (original data points) are input to the computer system 3 for reconstruction. Although Migdal in col. 22, lines 38-47 discloses that the 6D data points can be added or removed, those data points are the *original* data points, not the samples points from any lines. In fact, Migdal nowhere discloses obtaining any connection lines as recited in claims 1 and 5. Migdal simply teaches using more or less *original* data points to change the resolution, but fails to teach obtaining any sample points from a non-existing line. Therefore, Migdal also fails to teach "determining a number of sample points on each connection line" as recited in claims 1 and 5.

In addition, applying Migdal's teachings of adding/removing *original* 6D data points to Lee still fails to teach "determining a number of sample points on each connection line" as recited in claims 1 and 5. As mentioned, even if the number of the feature points (like original 6D data points) were changeable, Lee has to obtain a *new* snake because the previous snake is useless due to the change of the number of the feature points. In addition, the feature points or 6D data points are the original data, not the points obtained from the snake.

Accordingly, neither of the references utilized by the Examiner individually or in combination teaches or suggests the limitations of independent claims 1 and 5 or their dependent

claims. Therefore, Applicants respectfully submit that claims 1 and 5 and their dependent claims clearly define over the teachings of the references relied on by the Examiner.

Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Cheng-Kang (Greg) Hsu, Registration No. 61,007 at (703) 205-8000 in the Washington, D.C. area.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____

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